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ABSTRACT

To demonstrate the continuity between secondary and postsecondary occupational programs and the link between them and industrial manpower roles, this handbook cross references Georgia occupational educational programs and related job titles. Nineteen occupational clusters included in secondary schools are covered: agricultural power and mechanics; auto body repair; building construction; business and office occupations; conservation, recreation, and wildlife occupations; cosmetology; drafting occupations; electro-mechanical occupations and electronics; food service occupations; forestry; graphic arts; health occupations; marketing and distribution; metal working; occupational home economics; ornamental horticulture; transportation; and vocational agriculture. Each section charts postsecondary specialized skill areas linked to these clusters as well as job titles and corresponding Dictionary of Occupational Titles (DOT) code numbers. Job titles are then defined in pages following the charts. Additional specialized programs taught in only a few locations are listed. (Also available are guides containing task lists for use in competency based education in trade and industrial occupations, business and office education, and health occupations--see note.) (MN)

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HANDBOOK OF OCCUPATIONAL PROGRAMS

Georgia State Department of Education

Office of Vocational Education

Task Linkage Project
Publication No. 1
September 1979

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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College of Education
Georgia State University
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FOREWORD

The Task Linkage Project at Georgia State University is charged with the responsibility of providing a systematic overview of occupational education in Georgia. This overview is to illuminate and to illustrate the continuity between secondary and post-secondary occupational programs, as well as to demonstrate the strong link between these programs and industrial manpower roles. Additionally, the Task Linkage Project through publication of this initial document hopes to promote the use of a uniform terminology concerning occupational education. This is recommended in order to gain a better understanding of, and to simplify communications about, occupational programs in Georgia and their logical employment outcomes. Finally, this document is designed to provide educators, students, and citizens of Georgia with a comprehensive listing of occupational programs taught in the state and their related industrial job titles. To these ends, this publication is dedicated.

We would like to express our sincere gratitude to the faculty and staff of the Vocational and Career Development Department at Georgia State University for their assistance and support in making this document a reality. Our special thanks to Dr. Harmon Fowler and Dr. Dan Skutack for their encouragement of and interest in the Task Linkage Project.

Kenneth R. Allen, Project Director

Wanda W. Saed, Assistant Project Director

DEFINITION OF TERMS

1. Cluster (Secondary) - Titles of related vocational education programs which are taught in high schools in Georgia.

2. United States Office of Education code - numbers in parentheses. These are federal codes for the various vocational education programs.

3. Specialized Skill Area (Post-Secondary) - Titles of educational programs which are taught in Vocational-Technical schools in Georgia. These titles represent a logical program of study which follows the corresponding Cluster (Secondary) program. Students may, however, enter the Specialized Skill Area program of study without completion of or participation in the corresponding Cluster (Secondary) program.

4. Job Classifications - Representative sample of job titles for which students who successfully participate in the corresponding educational training programs might generally be prepared. The Job Classification list is arranged in order of relatively simple to relatively complex in regard to skills required for job performance. The first job title represents an entry level position. The last job title represents the position which, at least, requires mastery of all skills relevant to the related training programs. Attainment of skills necessary for this job title may require specific and in-depth additional experiences outside the scope of educational programs. Specific training programs in local schools might add to or delete from this list.

5. DOT Code - U. S. Department of Labor, Employment and Training Administration, Dictionary of Occupational Titles, job classification system. Reference to these codes in the Dictionary of Occupational Titles, Fourth Edition, 1977, will provide the reader with a performance description for each job title.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
	(Auto Mechanics)*		
	Farm Equipment Mechanics (01.0300)	Tractor Mechanic Helper	620.648-030
		Farm Equipment Mechanic II	624.381-014
		Tractor Mechanic	620.281-058
		Farm Equipment Mechanic I	620.281-010
*Agricultural Power and Mechanics Occupations (01.0300)	(Diesel Mechanics)*		
	(Small Engine Mechanics)*		

*This cluster could also lead to training in occupations detailed under the transportation cluster.

Agricultural Power & Mechanics Occupations Cluster*

I. Auto Mechanics*

II. Farm Equipment Mechanics

1. Tractor-Mechanic Helper - 620.684-030
Assists TRACTOR MECHANIC (auto ser.) in repairing tractors and tractor components, using handtools.

2. Farm-Equipment Mechanic - 624.381-014
Services, adjusts, and makes minor repairs on farm vehicles, machinery, and equipment, such as tractors, trucks, automobiles, harvesters, combines, silo fillers, plows, and similar equipment, using handtools.

3. Tractor Mechanic - 620.281-058
Diagnoses mechanical failures of and repairs tractors and tractor components according to manuals, factory specifications, and knowledge of engine performances, using handtools, power tools, and testing instruments.

4. Farm-Equipment Mechanic I - 624.281-010
Maintains, repairs, and overhauls farm machinery, equipment, and vehicles, such as tractors, harvesters, pumps, tilling equipment, trucks, and other mechanized, electrically powered, or motor-driven equipment, on farms or in farm-equipment repair shops.

III. Diesel Mechanics*

IV. Small Engine Mechanics*

*This could also lead to training in occupations detailed under the transportation occupation.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Auto-Body Repair (17.0301)	Auto Body Repair (17.0301)	Auto Body Repair Helper	807.687-010
		Painter Helper, Auto	845.684-014
		Auto Bumper Straightener	807.684-010
		Body Trimmer	780.381-010
		Shop Estimator	807.267-010
		Painter, Trans. Equipment	845.381-014
		Auto Body Repairer	807.381-010
		Auto Body Customizer	807.361-010

Auto Body Repair Cluster

I. Auto Body Repair

1. Automobile-Body-Repairer Helper - 807.687-010
Performs duties as described under HELPER (any ind.).

2. Painter Helper, Automotive - 845.684-014
Assists PAINTER, AUTOMOTIVE (auto. mfg.; auto. ser.) by preparing surfaces of automotive vehicles, such as automobiles, buses, and trucks, for repainting and and polishes repainted vehicles.

3. Automobile-Bumber Straightener - 807.684-010
Repairs damaged automobile bumpers preparatory to replating.

4. Body Trimmer - 780.381-010
Repairs or replaces upholstery in automobiles, buses, and trucks.

5. Shop Estimator - 807.267-010
Estimates cost of repairing damaged automobile and truck bodies, on basis of visual inspection of vehicle and familiarity with standard parts, costs and labor rates.

6. Painter, Transportation Equipment - 845.381-014
Paints surfaces of transportation equipment, such as automobiles, buses, trucks, and airplanes, according to specifications, using brushes and spray gun.

7. Auto Body Repairer - 807.381-010
Repairs damaged bodies and body parts of automotive vehicles, such as automobiles, buses, and light trucks according to repair manuals, using handtools and power tools.

8. Auto Body Customizer - 807.361-010
Installs custom equipment to alter appearance of automotive vehicle according to customer specifications, using handtools and power tools.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Building Construction (17.1099)	Carpenter (17.1001)	Lather	842.361-010
		Carpenter Helper	869.664-018
		Drywall Applicator	842.381-010
		Construction Worker	869.664-014
		Cabinet Maker	660.280-010
		Rough Carpenter	860.381-042
		Roofer	866.381-010
		Form Builder	860.381-022
		Carpenter	866.381-022
	Masonry (17.1004)	Brick Layer Helper	861.687-010
		Cement Mason	844.369-010
		Stone Mason	861.381-038
		Terazzo Worker	861.381-046
		Brick Layer, Const.	863.381-018
Sub-Clusters			
Carpentry	Plumbing (17.1007)	Pipe Cutter	862.687-010
Masonry		Pipefitter Helper	862.684-010
Electrical Wiring		Plumbing Assembler	862.684-026
Plumbing		Plumber	862.381-030
		Pipefitter	862.381-018
	Electrical Wiring (17.1002)	Electrician Helper	829.684-022
		Electrical Repairer	829.281-014
		Electrician	824.261-010
	Industrial Electrician (17.1401)	Assembler & Wirer Ind. Equip.	826.361-010
		Ind. Electrician	824.261-010

Cluster (continued) (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Cabinet Assembler	763.684-014
Building Construction	Cabinetmaking (17.3601)	Cabinetmaker, Maintenance	660.280-010
		Cabinetmaker	660.280-010

Building Construction Cluster

I. Carpentry

1. Lather -
842.361-010
Fastens wooden, metal, or rock-board lath to walls, ceilings, and partitions of buildings to provide supporting base for plaster, fireproofing, or acoustical material, using handtools and portable power tools.

2. Carpenter Helper -
869-664-014
Performs any combination of a number of duties on construction projects, usually working in utility capacity, by transferring from one task to another where demands require worker with varied experience and ability to work without close supervision.

3. Dry-Wall Applicator -
842.381-010
Plans gypsum drywall installations, erects metal framing and furring channels for fastening drywalls, and installs drywall to cover walls, ceilings, soffits, shafts, and movable partitions in residential, commercial, and industrial buildings.

4. Construction Worker -
869-664-014
Performs any combination of a number of duties on construction projects, usually working in utility capacity, by transferring from one task to another where demands require worker with varied experience and ability to work without close supervision.

5. Cabinet Maker -
660.280-010
Sets up and operates variety of woodworking machines and uses various handtools to fabricate and repair wooden cabinets and high-grade furniture.

6. Carpenter, Rough -
860.381-042
Builds rough wooden structures, such as concrete forms, scaffolds, tunnel and sewer supports, and temporary frame shelters, according to sketches, blueprints, or oral instructions.

7. Roofer -
866.381-010
Covers roofs with roofing materials, other than sheet metal, such as composition shingles or sheets, wood shingles, or asphalt and gravel, to waterproof roofs.

8. Form Builder -
860.381-046
Constructs built-in place or prefabricated wooden forms, according to specifications, for molding concrete structures.

9. Carpenter -
860.381-022
Constructs, erects, installs, and repairs structures and fixtures of wood, plywood, and wallboard, using carpenter's handtools and power tools, and conforming to local building codes.

II. Masonry

1. Bricklayer Helper, Firebrick and Refractory Tile -
861-687-010
Performs any combination of the following duties to assist BRICKLAYER, FIREBRICK AND REFRACTORY TILE (const.) in repairing and rebuilding furnaces, ovens, ladles, and similar structures: Removes burned and damaged brick and cleans surfaces of settings, using bar, hammers, chisels, and wire brush. Sweeps and removes refuse from casings. Conveys tools and materials to worksite. May mix mortar, using powered mixer. Performs other duties as described under HELPER (any ind.).

2. Cement Mason -
844.364-010
Smooths and finishes surfaces of poured concrete floors, walls, sidewalks, or curbs to specified textures, using handtools or power tools, including floats, trowels, and screeds.

3. Stone Mason -
861.381-038
Sets stone to build stone structures, such as piers, walls, and abutments, or lays walks, curbstones,

or special types of masonry, such as alberene (acid-resistant soapstone for vats, tanks, and floors), using mason's tools.

4. Terrazzo Worker -
861.381-046
Applies cement, sand, pigment, and marble chips to floors, stairways, and cabinet fixtures to attain durable and decorative surfacing according to specifications and drawings.

5. Bricklayer (Const.) -
861.381-018
Lays building materials, such as brick, structural tile, and concrete cinder, glass, gypsum, and terra cotta block (except stone) to construct or repair walls, partitions, arches, sewers, and other structures.

III. Plumbing

1. Pipe Cutter -
862.682-010
Operates machine to cut, thread, and ream pipes, and assembles pipes according to blueprints, to form mobile home water system, using handtools.

2. Pipe-Fitter Helper -
862.684-018
Assists PIPE FITTER (ship & boat bldg. & rep.) in assembling and installing aboard ships and boats pipe assemblies for systems such as propulsion, fresh water, and heat.

3. Plumbing Assembler-Installer -
862.684-026
Assembles and installs manufactured building bathroom hardware, fixtures, and plumbing, under direction of PLUMBER (mfd. bldgs.).

4. Plumber -
862.381-030
Assembles, installs, and repairs pipes, fittings, and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes.

5. Pipe Fitter -
862.381-018
Lays out, fabricates, assembles, installs, and maintains piping and piping systesm, fixtures, and equipment for steam, hot water, heating, cooling lubricating, sprinkling, and industrial processing systems, on basis of knowledge of system operation and study of building plans or working drawings.

IV. Electrical Wiring

1. Electrician Helper -
829.684-022
Assists ELECTRICIAN (any ind.) to install and repair electrical wiring, fixtures, and equipment, performing any combination of following tasks: Measures, cuts, and bends wire and conduit, using ruler and handtools. Drills holes for wiring, using power drill, and pulls or pushes wiring through opening. Assists in lifting, positioning, and fastening objects, such as wiring, conduit, and motors. Performs minor repairs, such as replacing fuses, light sockets, bulbs, and switches, using handtools. Maintains tools and equipment and keeps supplies and parts in order. Disassembles defective electrical equipment, such as motors, using handtools. Performs other duties as described under HELPER (any ind.).

2. Electrical Repairer -
829.281-014
Repairs, maintains, and installs electrical systems and equipment, such as motors, transformers, wiring, switches, and alarm systems.

3. Electrician -
824.261-010
Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment.

V. Industrial Electrician

1. Assembler & Wirer, Industrial Equipment -
826.361-010
Installs electrical wiring and assembles components in control cabinets, electrical and industrial equipment, and related industrial apparatus, according to blueprints and wiring diagrams.

3. Industrial Electrician -
824.261-010
Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment.

VI. Cabinetmaking

1. Cabinet Assembler -
763.684-014
Assembles radio, television, and phonograph cabinets, using handtools

2. Cabinetmaker -
660.280-010
Sets up and operates variety of woodworking machines and uses various handtools to fabricate and repair wooden cabinets and high-grade furniture. May repair furniture, equipment, and fixtures and be designated as CABINETMAKER, MAINTENANCE (woodworking).

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Business & Office Occupations (Includes Data Processing) (14.0000)	Accounting (14.0100)	Accounting Clerk	216.482-010
		Bookkeeping Machine Operator	210.382-022
		Bookkeeper, Machine	210.382-026
		Accounts Payable/Receivable Bookkeeper	210.382-018
		Bookkeeper I	210.382-018
		Bookkeeper II	210.382-018
	Clerical (14.0300)	File Clerk	206.382-010
		Records Clerk	206.387-022
		Clerk, General	209.562-010
		Clerk, General Office	219.362-010
		Clerk Typist	203.362-010
		Clerk Stenographer	202.362-014
	Secretarial (14.0700)	Stenographer	202.362-010
		Typist	203.582-066
		Secretary	201.362-010
	Data Processing (14.0200)	Data Typist	203.582-022
		Verifier Operator	203.582-070
		Keypunch Operator	203.582-030
		Terminal Operator	203.582-054
		Comp. Peripheral Equip. Op.	213-382-010
		Computer Operator	213.362-010
		Programmer Detail	219.367-026
		Programmer, Business	020.162-014

Business and Office Occupations Cluster

I. Accounting

1. Accounting Clerk - 216.482-010
Performs any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records.

2. Bookkeeping-Machine Operator I - 210.382-022
Operates bookkeeping machine to record data and to maintain complete set of records of financial transactions of establishment in same manner as BOOKKEEPER (clerical) I: Sorts documents to be posted, such as checks, and debit and credit items. Selects and places bookkeeping form on writing surface of machine and sets carriage. Depresses keys of machine keyboard to record identifying headings and data, and to calculate and post totals, net amounts, and other computations. Verifies entries and summarizes and balances totals to insure accuracy. Prepares periodic trial balances and other statistical information as required. May operate other office machines, such as adding and calculating machines.

3. Bookkeeping-Machine Operator II - 210.382-026
Operates bookkeeping machine to record data and maintain one phase or section of complete set of records pertaining to financial transactions of establishment in same manner as BOOKKEEPER (clerical) II: Selects and places bookkeeping form on writing surface of machine. Depresses keys of machine keyboard to record data. May be designated according to type of records kept as BOOKKEEPING-MACHINE OPERATOR, ACCOUNTS PAYABLE (clerical); BOOKKEEPING-MACHINE OPERATOR, ACCOUNTS RECEIVABLE (clerical).

4. Bookkeeper I - 210.382-014
Keeps complete set of records of financial transactions of establishment.

5. Bookkeeper II -
Keeps one section of set of financial records, performing duties as described under BOOKKEEPER (clerical) I.

II. Clerical

1. File Clerk I - 206.362-010
Files correspondence, cards, invoices, receipts, and other records in alphabetical or numerical order, or according to subject matter, phonetic spelling, or other system.

2. Record Clerk - 206.387-022
Keeps files of sample pads, slubbings, (slightly twisted fibers), and yarns for color comparison and stock reference.

3. Clerk, General - 209.562-010
Performs any combination of following and similar clerical tasks requiring limited knowledge of systems or procedures: Writes or types bills, statements, receipts, checks, or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with typewriter or addressograph machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distrubutes mail. Stamps or numbers forms by hand or machine. Copies documents, using office duplicating equipment.

4. Clerk, General Office - 219.362-010
Compiles and maintains records of business transactions and office activities of establishment, performing variety of following or similar clerical duties and utilizing knowledge of systems or procedures: Copies data and compiles records and reports. Tabulates and posts data in record books. Computes wages, taxes, premiums, commissions, and payments.

Records orders for merchandise or service. Gives information to and interviews customers, claimants, employees, and sales personnel. Receives, counts, and pays out cash. Prepares, issues, and sends out receipts, bills, policies, invoices, statements, and checks. Prepares stock inventory. Adjusts complaints. Operates office machines, such as typewriter, adding, calculating and duplicating machines. Opens and routes incoming mail, answers correspondence, and prepares outgoing mail. May take dictation. May prepare payroll. May keep books. May purchase supplies. May be designated according to field of activity or according to location of employment as ADJUSTMENT CLERK (ret. tr.; tel. & tel.); AIRPORT CLERK (air trans.); COLLIERY CLERK (mining & quarrying); DEATH-CLAIM CLERK (insurance); FIELD CLERK (clerical).

5. Clerk-Typist -
203.362-010
Compiles data and operates typewriter in performance of routine clerical duties to maintain business records and reports.

6. Clerk-Stenographer -
202.362-014
Takes dictation in shorthand of correspondence, reports, and other matter, and operates typewriter to transcribe dictated material.

III. Secretarial

1. Stenographer -
202.362-014
Takes dictation in shorthand of correspondence, reports, and other matter, and operates typewriter to transcribe dictated material.

2. Typist -
203.582-066
Types letters, reports, stencils, forms, addresses, or other straight copy material from rough draft or corrected copy. May verify totals on report forms, requisitions or bills. May operate duplicating machines to reproduce copy.

3. Secretary -
201.362-030
Schedules appointments, gives information to callers, takes dictation, and otherwise relieves officials of clerical work and minor administrative and business detail.

IV. Data Processing

1. Data Typist -
203.582-022
Operates special-purpose electric typewriter to convert alphabetic, numeric, and symbolic data into coded form on punchcards or tapes.

2. Verifier Operator -
203.582-070
Operates keyboard type machine that verifies accuracy of data in punched tabulating cards and rejects incorrectly punched cards.

3. Keypunch Operator -
203.582-030
Operates alphabetic and numeric keypunch machine, similar in operation to electric typewriter, to transcribe data from source material onto punchcards, paper or magnetic tape, or magnetic cards, and to record accounting or statistical data for subsequent processing by automatic or electronic data processing equipment.

4. Terminal Operator -
203.582-054
Operates on-line computer typewriter terminal to transmit data to or to receive data from computer at remote location.

5. Computer-Peripheral-Equipment Operator -
Operates on-line or off-line peripheral machines according to written or oral instructions, to transfer data from one form to another, print output, and read data into and out of digital computer.

6. Computer Operator -
213-362-010
Monitors and controls electronic computer to process business, scientific, engineering, or other data,

according to operating instructions.

7. Programer, Detail - 219.376-026
Selects symbols from coding system peculiar to make or model of digital computer and codes II successive steps of completed program for conversion to machine instructions to process data or to control industrial processes.

8. Programer, Business -
Converts symbolic statements of administrative data or business problems to detailed logical flow charts for coding into computer language.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Chemical Compounder	559.682-018
		Chemical Operator II	559.382-018
		Chemical Operator III	558.585-014
*Conservation, Recreation, Wildlife Occupations (01.0600)	**Chemical Technology & Chemical/Environmental Technology (16.0105)	Chemical Lab Technician	022.261-010
		Chemical Engineering Technician	008.261-010
		Environmental Technician	029.261-014
		Environmental Research Test Technician	003.261-010

*This Cluster also prepares students for training detailed under the Forestry Cluster.

**This area is included here because of its emphasis on conservation and environmental control.

Conservation, Recreation, Wildlife Occupations Cluster*

I. Chemical Technology & Chemical/Environmental Technology**

1. Chemical Compounder - 559.682-018
Controls equipment that processes coal tar hydrocarbons into intermediate compounds for use in manufacture of dyestuffs and pharmaceutical products.

2. Chemical Operator III - 559.382-018
Controls equipment units or system that processes chemical substances into specified industrial or consumer products, according to knowledge of operating procedures, chemical reactions, laboratory test results, and correlation of process instrumentation.

3. Chemical Operator II - 558.585-014
Tends equipment units or semi-automatic system that processes chemical substances into industrial or consumer products, such as detergents, emulsifiers, salts, bleaching agents, acids, and synthetic resins.

4. Chemical Lab Technician - 022.261-010
Conducts chemical and physical laboratory tests and makes qualitative and quantitative analyses of materials, liquids, and gases for purposes, such as research, development of new products and materials, processing and production methods, quality control, maintenance of health and safety standards, criminology, environmental, and others involving experimantal, theoretical or practical application of chemistry and related sciences.

5. Chemical Engineering Technician - 008.261-010
Applies chemical engineering principles and technical skills to assist CHEMICAL ENGINEER (profess. & kin.) in developing, improving, and testing chemical-plant processes, products, and equipment.

6. Environmental Technician - 029.264-014
Conducts tests and field investigations to obtain data for use by environmental, engineering, and scientific personnel in determining sources and methods of controlling pollutants in air, water, and soil, utilizing knowledge of agriculture, chemistry, meteorology, and engineering principles and applied technologies.

7. Environmental Research Test Technician - 003.261-010
Devises, sets up, and operates electronic instrumentation and related electro-mechanical or electro-hydraulic apparatus involved in operational and environmental testing of mechanical, structural, or electrical equipment, and translates test data for subsequent use by engineering personnel in making engineering design and evaluation decisions.

*This cluster also prepares students for training detailed under the Forestry Cluster.

**This area is included here because of its emphasis on conservation & environmental control.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
	Barbering (17.2601)	Barber	330.371-010
Cosmetology			
	Cosmetology (17.2602)	Shampooer	----------
		Manicurist	----------
		Receptionist	237.367-038
		Cosmetologist	332.271-010

Cosmetology Cluster

I. Barbering

1. Barber -
330.371-010
Provides customers with barbering services.

II. Cosmetology

1. Receptionist -
237.367-038
Receives callers at establishment, determines nature of business, and directs callers to destination.

2. Cosmetologist -
332.271-010
Provides beauty services for customers.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Drafter, Assistant	017.281-018
		Detailer	017.261-018
Drafting Occupations (17.1300)	Drafting	Drafter, Mechanical	007.281-010
	Drafting/Design Technology (17.1300)	Technical Illustrator	017.281-034
		Drafter, Landscape	007.261-014
Sub-Cluster		Drafter, Electrical	003.281-010
		Drafter, Civil	005.281-010
Mechanical Drawing		Drafter, Structural	005.281-014
Civil Drafting		Die Designer	007.161-010
Architectural Drafting		Drafter, Architectural	001.261-010
		Surveyor Helper	869.567-010
		Surveyor Helper, Chain	869.567-010
	Civil Technology (16.0106)	Surveyor Helper, Rod	869.567-010
		Land Surveyor	018.167-018

Drafting Occupations Cluster

I. Drafting
Drafting/Design Technology

1. Drafter, Assistant -
017.281-018
Copies plans and drawings prepared by DRAFTER (profess. & kin.) by tracing them with ink and pencil on transparent paper or cloth spread over drawings, using triangle, T-square, compass, pens, and other drafting instruments. Makes simple sketches or drawings under close supervision.

2. Detailer -
017.261-018
Drafts detailed drawings of parts of machines or structures from rough or general design drawings.

3. Drafter, Mechanical -
007.281-010
Drafts detailed working drawings of machinery and mechanical devices, indicating dimensions and tolerances, fasteners and joining requirements, and other engineering data. Drafts multiple-view assembly and subassembly drawings as required for manufacture and repair of mechanisms. Performs other duties as described under DRAFTER (profess. & kin.).

4. Technical Illustrator -
017.281-034
Lays out and draws illustrations for reproduction in reference works, brochures, and technical manuals dealing with assembly, installation, operation, maintenance, and repair of machines, tools, and equipment.

5. Drafter, Landscape -
001.261-014
Prepares detailed scale drawings and tracings from rough sketches or other data provided by LANDSCAPE ARCHITECT (profess. & kin.) performing duties described under DRAFTER (profess. & kin.). May prepare separate detailed site plan, grading and drainage plan, lighting plan, paving plan, irrigation plan, planting plan, and drawings and detail of garden structures. May build models of proposed landscape construction and prepare colored drawings for presentation to client.

6. Drafter, Electrical -
003.281-010
Drafts electrical equipment working drawings and wiring diagrams used by construction crews and repairmen who erect, install, and repair electrical equipment and wiring in communications centers, powerplants, industrial establishments, commercial or domestic buildings, or electrical distribution systems, performing duties as described under DRAFTER (profess. & kin.).

7. Drafter, Civil -
005.281-010
Drafts detailed construction drawings, topographical profiles, and related maps and specification sheets used in planning and construction of highways, river and harbor improvements, flood control, drainage, and other civil engineering projects, performing duties as described under DRAFTER (profess. & kin.).

8. Drafter, Structural -
005.281-014
Performs duties of DRAFTER (profess. & kin.) by drawing plans and details for structures employing structural reinforcing steel, concrete, masonry, wood, and other structural materials. Produces plans and details of foundations, building frame, floor and roof framing and other structural elements.

9. Die Designer -
007.161-010
Develops plans for single stage or progressive stage dies for stamping, forming, forging, or extrusion presses, according to blueprints of product and knowledge of press characteristics and process limitations.

10. Drafter, Architectural -
001.261-010
Performs duties of DRAFTER (profess. & kin.) by drawing artistic architectural and structural features of any class of buildings and like structures.

II. Civil Technology

1. Surveyor Helper -
869.567-010
Performs any of following duties to assist in surveying land: Holds level or stadia rod at designated points to assist in determining elevations or laying out stakes for mapmaking, construction, mining, land and other surveys. Calls out reading or writes station number and reading in notebook. Marks points of measurement with elevation, station number, or other identifying mark. Measures distance between survey points, using steel or cloth tape or surveyor's chain. Marks measuring points with keel (marking crayon), paint sticks, scratches, tacks, or stakes. Places stakes at designated points and drives them into ground at specified elevation, using hammer or hatchet. Cuts and clears brush and trees from line of survey, using brush hook, knife, ax, or other cutting tools. May perform duties as directed by LAND SURVEYOR (profess. & kin.) or SURVEYOR ASSISTANT, INSTRUMENTS (profess. & kin.). May perform one operation and be designated accordingly as BRUSH CLEANER, SURVEYING (any ind.); STAKER, SURVEYING (any ind.); SURVEYOR HELPER, CHAIN (any ind.); SURVEYOR HELPER, ROD (any ind.).

2. Land Surveyor -
018.167-018
Plans, organizes, and directs work of one or more survey parties engaged in surveying Earth's surface to determine precise location and measurements of points, elevations, lines, areas, and contours for construction, mapmaking, land division, titles, mining or other purposes.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Air Conditioning Installer, Helper	637.687-010
		Environmental Control System Helper	637.664-010
	Air Conditioning/Heating (17.0100)	Air Conditioning Installer Window Unit	637.261-010
		Air Conditioning Installer	827.464-010
		Furnace Installer & Repairer	869.281-010
		Environmental Control Installer-Servicer	637.261-014
		Air Conditioning Technician	007.181-010
Electro-Mechanical (17.2399)			
		Gas Appliance Service Helper	637.684-010
		Household Appliance Installer	827.661-010
Sub-Cluster	Appliance Servicing (17.0200)	Electrical Appliance Servicer	827.261-010
		Washing Machine Servicer	827.281-010
Air Conditiong/Heating		Appliance Repairer	723.584-010
Appliance Repair		Electrical Appliance Repairer	723.381-010
Electrical Wiring			
		Env. Control System Helper	637.664-010
			637.614-010
		Electrical Tool Repairer	729.281-022
	Electro-Mechanical Technology (16.0109-16.0110)	Pneumatic Tester & Mechanic	621.381-022
		Refrigeration Mechanic	827.361-014
		Environmental Control System Installer-Servicer	637.261-014
		Electrician	824.261-010
		Electro Mechanical Technician	710.281-018

Cluster (continued) (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
	Industrial Plant Maintenance (17.0199)	Maintenance Repair Helper	899.684-022
		Maintenance Mechanic Help	634.684-018
		Maintenance Repairer, Factory	899.281-014
		Electrical Repairer	825.281-014
		Maintenance Mechanic	638.281-014
		Maintenance Machinist	600.280-042
Electro-Mechanical (17.2399)	Instrumentation Technology (16.0112)	Instrument Checker	710.687-026
		Instrument Tech. Helper	710.684-030
		Instrument Fitter	862.381-018
		Instrument Mechanic	710.281-026
		Instrument Maker	600.280-010
		Instrument Technician	710.281-030
		Instrumentation Technician	003.261-010
	Lineman (17.1402)	Construction Checker	821.367-010
		Line Repairer, Tower	821.361-026
		Line Repairer	821.361-026

Electro-Mechanical Cluster

I. Air Conditioning/ Heating

1. Air-Conditioning Installer Helper - 637.687-010
Assists AIR-CONDITIONING INSTALLER-SERVICER, WINDOW UNIT (any ind.) in repairing, servicing, or installing window-mounted air-conditioning units, performing any combination of following duties: Carries unit from delivery vehicle to worksite. Assembles window-support brackets, using handtools. Cuts opening through wall for insertion of unit, using hammer and chisel. Applies calking compound to excess space between air conditioner and wall opening. Performs other duties as described under HELPER (any ind.).

2. Environmental-Control-System Helper - 637.664-010
Assists workers engaged in installing, repairing, and servicing industrial, commercial, and residential environmental-control-systems.

3. Air-Conditioning Installer-Servicer, Window Unit - 637.261-010
Installs, services, and repairs air-conditioning units, ranging from 1/2 to 2 tons capacity, in private residences and small business establishments.

4. Air-Conditioning Installer, Domestic - 827.464-010
Installs window- or central-air-conditioning units in private residences and small business establishments.

5. Furnace Installer & Repairer, Hot Air - 869.281-010
Installs and repairs hot-air furnaces, stoves, and similar equipment in accordance with diagrams and other specifications, using handtools and pipe-threading tools.

6. Environmental-Control-System Installer-Servicer - 637.261-014
Installs, services, and repairs environmental-control systems in residences, department stores, office buildings, and commercial establishments, utilizing knowledge of refrigeration theory-pipefitting, and structural layout.

7. Air-Conditioning Technician - 007.181-010
Plans requirements for fabricating, installing, testing, and servicing climate control and heat transfer assemblies and systems to assist engineering personnel, utilizing knowledge of heat transfer technology and engineering methods.

II. Appliance Servicing

1. Gas-Appliance-Servicer Helper - Assists GAS-APPLIANCE SERVICER (any ind.) in installing, testing, adjusting, and repairing regulators, ranges, and heaters, in customer's establishments.

2. Household-Appliance Installer - 827.661-010
Installs household appliances, such as refrigerators, washing machines, stoves, and related appliances, in mobile homes or customer's homes, using handtools.

3. Electrical-Appliance Servicer - 827.261-010
Installs, services, and repairs stoves, refrigerators, dishwashing machines, and other electrical household or commercial appliances, using handtools, test equipment, and following wiring diagrams and manufacturer's specifications.

4. Washing-Machine Servicer - 827.261-010
Same as ELECTRICAL-APPLIANCE SERVICER.

5. Appliance Repairer - 723.584-010
Repairs portable, household electrical appliances, such as fans, heaters, vacuum cleaners, toasters, and flatirons, on assembly line.

6. Electrical-Appliance Repairer - 723.381-010
Repairs electrical appliances, such as toasters, cookers, percolaters, lamps, and irons, using handtools and electrical testing instruments.

III. Electro-Mechanical Technology

1. Environmental-Control-System Installer-Servicer Helper - 637.664-010
Assists workers engaged in installing, repairing, and servicing industrial, commercial, and residential environmental-control systems.

2. Electric-Tool Repairer - 729.281-022
Repairs electrical handtools and bench tools, such as drills, saws, grinders, and sanders, using lathe, circuit testers, handtools, and power tools.

3. Pneumatic Tester and Mechanic - 621.381-022
Tests, adjusts, and repairs aircraft pneumatic units, such as valves, pumps, and regulators, according to specifications, using handtools, power tools, and test equipment.

4. Refrigeration Mechanic - 827.361-014
Fabricates and assembles components of refrigeration systems for environmental test equipment according to blueprints or schematic drawings and knowledge of refrigeration systems, using handtools, powered tools and welding equipment.

5. Environmental-Control-System Installer-Servicer - 637.261-014
Installs, services, and repairs environmental-control systems in residences, department stores, office buildings, and commercial establishments, utilizing knowledge of refrigeration theory, pipefitting, and structural layout.

6. Electrician - 824.261-010
Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment.

7. Electromechanical Technician - 710.281-018
Fabricates, tests, analyzes, and adjusts precision electromechanical instruments, such as temperature probes, gyroscope units, telemetering systems, altimeters, and aerodynamic probes, following blueprints and sketches, using handtools, metalworking machines, and measuring and testing instruments.

IV. Industrial Plant Maintenance

1. Maintenance-Repairer Helper - 899.684-022
Assists MAINTE[illegible]REPAIRER, FACTORY OR MILL (any ind.) in repairing and maintaining machinery, plumbing, physical structure, and electrical wiring and fixtures of commercial and industrial establishments.

2. Maintenance-Mechanic Helper - 638.684-018
Assists MAINTENANCE MECHANIC (any ind.) in repairing and maintaining machinery and mechanical equipment.

3. Maintenance Repairer, Factory or Mill -
Repairs and maintains machinery, plumbing, physical structure, and electrical wiring and fixtures of commercial and industrial establishments in accordance with blueprints, manuals, and building codes, using handtools, and carpenter's, electrician's, and plumber's tools.

4. Electrical Repairer - 825.281-010
Repairs aircraft electrical components and subassemblies, such as relays, solenoids, and wiring and cable harnesses, using handtools.

5. Maintenance Mechanic - 638.281-014
Repairs and maintains, in accordance with diagrams, sketches, operation manuals, and manufacturer's specifications, machinery and mechanical equipment, such as engines, motors,

pneumatic tools, conveyor systems, and production machines and equipment, using handtools, power tools, and precision-measuring and testing instruments.

6. Maintenance Machinist - 600.280-042
Sets up and operates variety of machine tools, and fits and assembles parts to fabricate or repair machine tools and maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures.

V. Instrumentation Technology

1. Instrument Checker - 710.687-026
Inspects instruments, such as thermostats and sequence controls used on refrigerators, clothes dryers, and air conditioners for conformance to specifications.

2. Instrument-Technician Helper - Assists INSTRUMENT TECHNICIAN (light, heat, & power) in repair and maintenance of metering instruments for electric-power generating equipment, such as boilers and turbines.

3. Instrument Fitter - 862.381-018
Lays out fabricates, assembles, installs, and maintains piping and piping systems, fixtures,

and equipment for steam, hot water, heating, cooling, lubricating, sprinkling, and industrial processing systems, on basis of knowledge of system operation and study of building plans or working drawings.

4. Instrument Mechanic - 710.281-026
Installs, repairs, maintains, and adjusts indicating, recording, telemetering, and controlling instruments used to measure and control variables, such as pressure, flow, temperature, motion, force, and chemical composition, using handtools and precision instruments.

5. Instrument Maker - 600.280-010
Fabricates, modifies, or repairs mechanical instruments or mechanical assemblies of electrical or electronic instruments, such as chronometric timing devices, barographs, thermostats, seismographs, and servomechanisms, applying knowledge of mechanics, metal properties, shop mathematics, and machining procedures and using machine tools, welding and heat-treating equipment, precision measuring instruments, and handtools.

6. Instrument Technician - 710.281-030
Inspects, tests, adjusts, and repairs electric, electronic, mechanical, and pneumatic instruments and systems used to indicate, record, and control generating operations in conventional or nuclear power electric generating plant.

7. Instrumentation Technician - 003.261-010
Devises, sets up, and operates electronic instrumentation and related electromechanical or electrohydraulic apparatus involved in operational and environmental testing of mechanical, structural, or electrical equipment, and translates test data for subsequent use by engineering personnel in making engineering design and evaluation decisions.

VI. Lineman

1. Construction Checker - 821.367-010
Inspects and prepares reports concerned with construction and maintenance of overhead or underground electric-powerline projects or extensions.

2. Line Repairer - 821.361-026
Repairs and replaces transmission and distribution powerlines between generating stations, substations, and consumers, requiring use of precautionary work methods and safety equipment due to electrical hazards present when working on or near energized conductors and electrical accessories. Powerline repairers

experienced in repair of energized or deenergized conductors suspended from electrically conductive metal towers, commonly one-hundred feet or more above ground, may be designated LINE REPAIRER, TOWER (light, heat & power).

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Electronics (17.1500)	Electrical Technology (16.0107)	Electric Meter Installer	821.361-014
		Electric Motor Assembler & Tester	721.281-014
		Electric Motor Analyst	721.261-010
		Electric Motor Repairer	721.281-018
		Power Transformer Repairer	821.361-034
		Electrician	824.261-010
		Electrical Technician	003.161-010
	Electronic Technology (16.0108)	Electronics Utility Worker	726.361-010
		Electronics Assembler	726.684-018
		Electronics Mechanic	828.281-010
		Electrical Repairer	829.281-014
		Assembly Technician (computer)	633.261-010
		Wirer (computer)	729.281-042
		Radio Telephone Operator	193.262-034
		Electronics Technician	003.161-014
	Industrial Electronics Tech. (17.1401)	Motor Room Controller	820.662-010
		Relay Technician	821.261-018
		Electrician, Powerhouse	820.261-014
		Electrician, Substation	820.261-018
		Electrical Repairer	829.281-014
		Electronics Technician	003.161-014
	Radio-T.V. Repair (17.1503)	Antenna Installer	823.684-010
		T.V. Cable Installer	821.281-010
		T.V. Installer	823.361-010
		Radio Mechanic	823.261-018
		Tape Recorder Repairer	720.281-014
		Radio Electrician	823.281-014
		Radio Repairer	720.281-010
		T.V. & Radio Repairer	720.281-018

Electronics Cluster

I. Electrical Technology

1. Electric Meter Installer - 821.361-014
Installs, disconnects, removes, and reconnects electric power meters used to record current consumption of residential, commercial, and industrial customers.

2. Electric Motor Assembler and Tester - 721.281-014
Assembles and adjusts repaired electric motors to meet specified ratings, using handtools and electrical meters.

3. Electric-Motor Fitter - 721.381-010
Cleans, assembles, and tests motors of locomotives and streetcars.

4. Electric-Motor Analyst - 721.261-010
Determines causes of failures in electric motors, following drawings and specifications and using handtools and electrical test meters.

5. Electric-Motor Repairer - 721.281-018
Repairs electric motors, generators, and equipment, such as starting devices and switches, following schematic drawings, and using handtools, coil-winding machines, power tools, and test equipment.

6. Power-Transformer Repairer - 821-361-034
Repairs power transformers used in electric generating stations and substations to step-up voltage of current being fed out over high-voltage powerlines or to step-down voltage of incoming current prior to being fed to lower voltage distribution lines or electric equipment.

7. Electrician - 824.261-010
Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment.

8. Electrical Technician - 003.161-010
Applies electrical theory and related knowledge to test and modify developmental or operational electrical machinery and electrical control equipment and circuitry in industrial or commercial plants and laboratories.

II. Electronic Technology

1. Electronics Utility Worker - 726.361-010
Arranges layout of work station for other workers who fabricate, process, or assemble electronic equipment, and components, such as semiconductor devices, printed circuit boards, chassis assemblies, and wire harnesses and cables.

2. Electronics Assembler - 726.684-018
Assembles electronic components, subassemblies, and systems by any one or combination of following methods: Reads work orders, follows production drawings and sample assemblies, and receives verbal instructions regarding duties to be performed.

3. Electronics Mechanic - 828.281-010
Repairs electronic equipment, such as computers, industrial controls, radar systems, telemetering and missile control systems, transmitters, antennas, and servomechanisms, following blueprints and manufacturers' specifications, and using handtools and test instruments.

4. Electrical Repairer - 829.281-014
Repairs, maintains, and installs electrical systems and equipment, such as motors, transformers, wiring, switches, and alarm systems.

4. Assembly Technician (Ccmputer) - 633.261-010
Inspects, adjusts, and repairs punched-card office machines, such as interpreters, collators, proof machines for banks, and card punches, using handtools and test equipment.

5. Wirer (Office Mach.) - 729.281-042
Installs, adjusts, and repairs wiring and cables in punched card office machines, and adding machines according to wiring diagrams, blueprints, and engineering specifications, using handtools, soldering iron, and plugging gun.

6. Radiotelephone Operator - 193.262-034
Operates and keeps in repair radiotelephone transmitter and receiving equipment for commercial communication.

7. Electronics Technician - 003.161-014
Applies electronic theory, principles of electrical circuits, electrical testing procedures, engineering mathematics, physics, and related knowledge to lay out, build, test, troubleshoot, repair, and modify developmental and production electronic equipment, such as computers, missile-control instrumentation, and machine tool numerical controls.

III. Industrial Electronic Technology

1. Motor-Room Controller - 820.662-010
Controls generation and distribution of electrical power from in-plant power station to plant facilities, such as rolling mills or machine shops, and maintains equipment in efficient and safe operating condition.

2. Relay Technician - 821.261-018
Performs electrical tests and repairs concerned with maintenance and performance evaluation of in-service relays to prevent and remedy abnormal behavior or failure of transmission and distribution lines and equipment.

3. Electrician, Powerhouse - 820.261-014
Repairs and maintains electrical equipment in generating station or powerhouse.

4. Electrician, Substation - 820.261-010
Inspects, tests, and maintains substation electrical equipment, such as oil circuit breakers and transformers.

5. Electrical Repairer - 829.281-014
Repairs, maintains, and installs electrical systems and equipment, such as motors, transformers, wiring, switches, and alarm systems.

6. Electronics Technician - 003.161-014
Applies electronic theory, principles of electrical circuits, electrical testing procedures, engineering mathematics, physics, and related knowledge to lay out, build, test troubleshoot, repair, and modify developmental and production electronic equipment, such as computers, missile-control instrumentation, and machine tool numerical controls.

IV. Radio-T.V. Repair

1. Antenna Installer - 823.684-010
Installs antennas for radio or television receiving sets.

2. T.V. Cable Installer - 821-281-010
Installs CATV (community antenna television distribution cables) on customers' premises.

3. T.V. Installer - 823.361-010
Installs and adjusts television receivers and antennas, using handtools.

4. Radio Mechanic - 823.261-018
Tests and repairs radio transmitting and receiving equipment in accordance with diagrams

and manufacturer's specifications, using handtools and electrical measuring instruments.

5. Tape-Recorder Repairer - 720.281-014
Tests, repairs, and adjusts tape-recording machines, following schematic diagrams and manufacturer's specifications, using handtools and electronic testing instruments.

6. Radio Electrician - 823.281-014
Adjusts, installs, tests, and repairs high-powered stationary and mobile radio transmitting equipment, using handtools and testing instruments and following wiring diagrams.

7. Radio Repairer - 720.281-010
Repairs radio receivers, phonographs, recorders, and other electronic-audio equipment, using circuit diagrams and test meters.

8. Television and Radio Repairer - 720.281-018
Repairs and adjusts radios and television receivers, using handtools and electronic testing instruments.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Restaurant Worker	311.677-014
		Dining Room Attendant	311.677-018
		Waiter/Waitress Informal	311.477-030
		Waiter/Waitress Formal	311.477-026
Food Service Occupations (17.2900)	Food Service Occupations (17.2900)	Host/Hostess	310.137-010
		Short Order Cook 1	313.361-022
Sub-Cluster		Short Order Cook 2	313.671-010
Restaurant Worker		Meat Cutter	316.684-018
Waitress/Waiter		Cook	313.361-014
Hostess			
Cook (meat cutter)			

Food Service Occupations Cluster

I. Food Service Occupations

1. Restaurant Worker - 311.677-014
   Serves food from counters and steamtables to cafeteria patrons.

2. Dining Room Attendant - 311.677-018
   Performs any combination of the following duties to facilitate food service: Carries dirty dishes from dining room to kitchen. Replaces soiled table linens and sets tables with silverware and glassware. Replenishes supply of clean linens, silverware, glassware, and dishes in dining room. Supplies service bar with food, such as soups, salads, and desserts. Serves ice water and butter to patrons. Cleans and polishes glass shelves and doors of service bars and equipment, such as coffee urns and cream and milk dispensers. Makes coffee and fills fruit juice dispensers. Runs errands and delivers food orders to offices and is designated RUNNER (hotel & rest.). May transfer food and dishes between floors of establishment, using dumbwaiter. May be designated according to type of activity or area of work as CLEAN-UP HELPER, BANQUET (hotel & rest.); COUNTER DISH CARRIER (hotel & rest.); GLASS WASHER AND CARRIER (hotel & rest.); ROOM SERVICE ASSISTANT (hotel & rest.); STEAMTABLE WORKER (hotel & rest.); TABLE SETTER (hotel & rest.); WATER SERVER (hotel & rest.).

3. Waiter/Waitress, Informal - 311.477-030
   Serves food to patrons at counters and tables of coffeeshops, lunchrooms, and other dining establishments where food service is informal.

4. Waiter/Waitress, Formal - 311.477-026
   Serves meals to patrons according to established rules of etiquette, working in formal setting.

5. Host/Hostess - 310.137-010
   Supervises and coordinates activities of dining room personnel to provide fast and courteous service to patrons.

6. Short Order Cook 1 - 313.361-022
   Prepares and cooks to order foods requiring only short praparation time.

7. Short Order Cook 2 - 313.671-010
   Prepares food and serves restaurant patrons at counters or tables.

8. Meat Cutter - 316.684-018
   Cuts and trims meat to size for display or as ordered by customer, using handtools and power equipment, such as grinder, cubing machine, and powersaw. Cleans and cuts fish and poultry. May shape, lace, and tie meat cuts by hand, using boning knife, skewer, and twine to form roasts. May place meat on trays in display counter. May wrap and weigh meat for customers and collect money for sales. May inspect and grade meats and be designated MEAT INSPECTOR (ret.tr; whole. tr.).

9. Cook - 313.361-014
   Prepares, seasons, and cooks soups, meats, vegetables, desserts, and other foodstuffs for comsumption in hotels and restaurants.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Forestry (01.0700)	Forest Technology (16.0603)	Tree Planter	452.687-018
		Forest Products Gatherer	453.687-010
		Forest Worker	452.687-010
		Forester Aide	452.364-010
		Tree Cutter	454.684-026
		Cruiser	459.387-010
		Logger, All Around	454.684-018
		Forest Technician	452.364-010

Forestry Cluster

I. Forest Technology

1. Tree Planter -
452.687-018
Plants seedling trees to reforest timber lands or Christmas tree farms.

2. Forest-Products Gatherer -
453.687-010
Gathers decorative greens, medicinal plants and barks, tree cones, moss, or other plant life from forest by hand or using handtools, such as pruning shears, knife, or shovel.

3. Forest Worker -
452.687-010
Performs variety of tasks to reforest and protect timber tracts and maintain forest facilities, such as roads and campsites.

4. Forester Aide -
452.364-010
Compiles data pertaining to size, content, condition, and other characteristics of forest tracts, under direction of FORESTER (profess. & kin.); and leads workers in forest propagation, fire prevention and suppression, and facilities maintenance.

5. Tree Cutter -
454.684-026
Fells trees of specified size and specie, trims limbs from tree, and cuts tree into lengths for firewood, fence posts, or pulpwood, using ax, measuring tool and chainsaw. Splits logs, using ax, wedges and maul. May stack wood in rick or cord lots. May load wood into trucks. May be designated as FENCE-POST CUTTER (agric.); FIREWOOD CUTTER (logging); PULPWOOD CUTTER (logging).

6. Cruiser -
459.387-010
Cruises forest land to estimate volume of marketable timber and collect data concerning forest conditions for appraisal, sales, administration, logging, land use, and forest management planning.

7. Logger, All-Round -
454.684-018
Harvests timber trees, performing a combination of the following tasks: Fells trees in specified direction, removes limbs and top, and measures and cuts tree into log lengths, using chainsaw, wedges, and ax. Secures cables to logs and drives tractor or horses to skid logs to landing. Loads logs onto trucks by hand or using winch. May drive truck to haul logs to mill.

8. Forest Technician -
452.364-010
Same as FORESTER AIDE.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Litho-Make-Ready-Assistant	972-664-010
		Collator	977-687-010
		Transformer	972.381-026
		Offset Duplicating Machine Operator	651.682-014
		Make-up Arranger	973.381-026
		Compositor	973.381-010
		Photo-Composition	
	Graphic Arts (17.1900)	Keybound Operator	203.582-046
		Stripper, Photolithographic	972.382-014
		Off-Set Platemaker	971.381-018
		Off-Set Press Operator I	651.482.010
		Photographer Lithographic	972.382-018
		Book Binder	977.381-010
Graphic Arts (17.900)		Job Printer	973.381-018
		Silk Screen Printer, Machine	652.665-010
		Printer	652.685-062
		Graphic Arts Technician	979.382-018
Sub-Cluster			
Composition & Layout		Commercial Artist, Lettering	970.661-014
Camera & Platemaking		Technical Illustrator	017.281-034
Press Operation	Commercial Arts	Fashion Artist	141.061-014
Binding Operations		Commercial Artist	141.061.022
		Commercial Designer	141.081-014
	Commercial Photography	Photographer's Helper	976.667-010
		Commercial Photographer	143.062-030

Graphic Arts Cluster

I. Graphic Arts

1. Litho-Make-Ready Assistant - 972.664-010
Performs duties in preapprenticeship program to assist PHOTOGRAPHER, LITHOGRAPHIC (print. & pub.); STRIPPER, PHOTO-LITHOGRAPHIC (print. & pub.); LITHOGRAPHIC PLATE MAKER (print. & pub.); and other workers engaged in producing photolithographic printing plates. Performs duties, such as mixing chemicals, assisting in operation of photographic machines and equipment, hand and machine developing of film, preparing negatives, assisting in making photolithographic prints, and other duties as described under HELPER (any ind.).

2. Collator, Hand - 977.687-010
Arranges and stacks printed or unprinted sheets on worktable according to size, weight, color or number sequence: Picks up one sheet at a time from each stack to assemble complete set.

3. Transferrer - 972.381-026
Transfers images, by hand, from photographic nagatives to zinc plates for printing by lithographic process.

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4. Offset-Duplicating-Machine Operator - 651.682-014
Operates machine to reproduce typewritten matter, drawings, graphs, and similar material by photo-offset process.

5. Make-Up Arranger - 973.381-026
Arranges, groups, and locks galley setups of type, cuts, and headings in chases, according to dummy make-up sheet, for direct printing, reproduction proofs or fabrication of stereotype and electrotype plates.

6. Compositor - 973.381-010
Sets type by hand and machine, and assembles type and cuts in a galley, for printing articles, headings, and other printed matter, determining type size, style, and compositional pattern from work order.

7. Photocomposition-Keyboard Operator - 203.582-046
Operates keyboard of computer terminal equipped with video display screen to record data from manuscript for storage and retrieval into and from computer system for subsequent reproduction as printed matter.

8. Stripper, Photolithographic - 972.381-022
Positions negative and positive film on layout sheets to assemble film flat used in production of photolithographic printing plates, according to customer specifications, using precision measuring instruments and artists work aids.

9. Off-set Plate Maker - 971.381-018
Operates copy camera to photograph prepared copy, and transfers photographic image to stencils or to plates used in offset printing.

10. Offset-Press Operator I - 651.482-010
Makes ready and operates offset printing press to print single and multicolor copy from lithographic plates, examining job order to determine press operating time, quantity to be printed, and stock specifications.

11. Photographer, Lithographic - 972.382-014
Sets up and operates camera to photograph illustrations and printed material and priduce film or glass negatives or positives used in the preparation of lithographic printing plates.

12. Bookbinder - 977.381-010
Cuts, sews, and glues components to bind books, using sewing machine, handpress, and handcutter.

13. Job Printer - 973.381-018
Sets type according to copy and operates cylinder or automatic platen press to print complete job order.

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14. Silk-Screen Printer, Machine -
652.655-010
Tends silk-screen machine that prints designs or lettering on glassware, pottery, and metal and plastic items, such as appliances, instrument dials, and toys.

15. Printer -
652.685-062
Tends machine that prints trademarks, advertisements, and designs on parts of marking devices, such as pens, wooden and mechanical pencils, or felt or fiber tipped markers.

16. Graphic Arts Technician -
979.328-018
Reproduces and assembles graphic arts materials performing any combination of the following tasks: Operates machine to type master copies, such as stencils, tracings, direct plates, and photo-offsets in preparation for line copy reproduction.

II. Commercial Art

1. Commercial Artist, Lettering -
970.661-014
Paints or draws precise lettering to be reproduced in advertisements, books, and other printed materials, using lettering pen or brush and determining lettering design from layout sketches and instructions. May design lettering when style of letters is not specified.

2. Technical Illustrator -
Lays out and draws illustrations for reproduction in reference works, brochures, and technical manuals dealing with assembly, installation, operation, maintenance, and repair of machines, tools, and equipment.

3. Fashion Artist -
141.061-014
Draws or paints apparel and accessory illustrations for newspaper or related advertisements.

4. Commercial Artist -
141.061-022
Draws or paints illustrations for use by various media to explain or adorn printed or spoken word.

5. Commercial Designer -
141.081-014
Creates and designs graphic material for use as ornamentation, illustration, advertising, or cosmetic on manufactured materials and packaging.

III. Commercial Photography

1. Photographer Helper -
Assists PHOTOGRAPHER, STILL (profess. & kin.) in taking and developing photographs.

2. Commercial Photographer -
143.062-030
Photographs subjects using still cameras, color or black-and-white film, and a variety of photographic accessories.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Health Occupations (07.0000)	Nursing Assistant (07.0303)	Nurse's Aide	355.674-014
	Practical (Vocational) Nursing (07.0302)	Licensed Practical Nurse	079.374-014
	Dental Assisting (07.0101)	Dental Assistant	079.371-010
	Dental Lab Technology (07.0103)	Dental Lab Technician	712.381-018
	Emergency Medical Technology (07.0907)	Emergency Medical Technician	079.374-010
	Medical Secretary (07.0000)	*Medical Secretary	201.362-014
	Operating Room Technology (07.0305)	Operating Room Technician	079.374-022
	Medical Assisting (07.0000)	Medical Assistant	079.367-010
	Medical Lab Assisting (07.0203)	Medical Lab Assistant	079.381-010
	Medical Office Assisting (07.0904)	Medical Office Assistant	079.367-010
	X-Ray Technology (07.0501)	X-Ray Technician	078.362-026
	Research Lab Technology (07.0103)	Research Lab Technician	078.381-014

Cluster (Continued) (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classification	DOT Code
	Opthalmic Dispensing (07.0601)	Opthalmic Dispensor	713.361-014
	Optical Lab Technology (07.0000)	Optical Lab Technician	716.382-018
	Respiratory Therapy (07.0902)	Respiratory Therapist	079.361-010

*This job classification also includes tasks outlined under DOT number 201.362-030.

Health Occupations Cluster

I. Nursing Assistant

1. Nurse's Aide - 355.674.014
   Assists in care of hospital patients, under direction of nursing and medical staff.

II. Practical (Vocational) Nursing

1. Licensed Practical Nurse - 079.374-014
   Cares for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions.

III. Dental Assisting

1. Dental Assistant - 079.371-010
   Assists DENTIST (medical ser.) engaged in diagnostic, operative, surgical, periodontal, preventive, orthodontic, removable and fixed prosthdontic, endodontic, and pedodontic procedures during examination and treatment of patients.

IV. Dental Lab Technology

1. Dental Lab Technician - 712.381-018
   Fabricates and repairs full and partial dentures according to DENTIS'S (medical ser.) prescription, using handtools, molding equipment, and bench fabricating machines.

V. Emergency Medical Technology

1. Emergency Medical Technician - 079.374-010
   Administers first-aid treatment to and transports sick or injured persons to medical facility, working as a member of emergency medical team.

VI. Medical Secretary

1. * Medical Secretary - 201.362-014
   Performs secretarial duties utilizing knowledge of medical terminology and hospital, clinic, or laboratory procedures.

VII. Operating Room Technology

1. Operating Room Technician - 079.374-022
   Performs any combination of following tasks before, during, and after operation: Washes, shaves, and sterilizes operative area of patient. Scrubs hands and dons cap, mask, gown, and rubber gloves. Places equipment and supplies in operating room according to SURGEON'S (medical ser.) I directions, and arranges instruments as specified by NURSE, GENERAL DUTY (medical ser.). Aids team to don gowns and gloves. Maintains specified supply of such fluids as plasma, saline, blood, and glucose for use during operation. Adjusts lights and other equipment as directed. Washes and sterilizes used equipment, suing germicides, autoclave, and sterilizer. Cleans operating room. Counts sponges, needles, and instruments used during operation. May assist in administering blood, plasma, and other injections and transfusions. May hand SURGEON (medical ser.) I instruments and supplied, hold retractors, and cut sutures, as directed during operation.

VIII. Medical Assisting

1. Medical Assistant - 079.367-010
   Performs following duties under direction of PHYSICIAN (medical ser.) in examination and treatment of patients: Prepares treatment rooms for examination of patient. Drapes patients with covering and positions instruments and equipment. Hands instruments and materials to doctor as directed. Sterilizes and cleans instruments. Prepares inventory of supplies to determine items to be replenished. Interviews patients and checks pulse, temperature, blood pressure, weight, and height. May operate equipment, give injections or treatments, and assist in laboratory. May schedule appointments, receive moeny for bills, keep X-ray and other medical records, perform secretarial tasks, complete insurance forms, and maintain financial records.

IX. Medical Lab Assistant

1. Medical Lab Assistant - 078.381-010
Performs routine tests in medical laboratory for use in treatment and diagnosis of disease.

X. Medical Office Assisting

1. Medical Office Assistant - 079.367-010
Same as MEDICAL ASSISTANT.

XI. X-Ray Technology

1. X-Ray Technician - 078.362-026
Applies roentgen rays and radioactive substances to patients for diagnostic and therapeutic purposes.

XII. Research Lab Technology

1. Research Lab Technician - 078.381-014
Performs routine tests in medical laboratory for use in treatment and diagnosis of disease.

XIII. Opthalmic Dispensing

1. Opthalmic Dispensor - 713.361-014
Designs, fits, and adapts lenses and frames, utilizing written optical prescription.

XIV. Optical Lab Technology

1. Optical Lab Technician - 716.382-018
Sets up and operates grinding and polishing machines to make lenses, optical flats, and other precision optical elements for optical instruments and opthalmic goods, such as telescopes, microscopes, aerial cameras, military optical systems, and eyeglasses, or for use as standards.

XV. Respiratory Therapy

1. Respiratory Therapist - 079.361-010
Administers respiratory therapy care and life support to patients with deficiencies and abnormalities of cardiopulmonary system, under supervision of PHYSICIAN (medical ser.) and by prescription.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Marketing and Distribution (04.0000)	Marketing Sales (04.0800)	Sales Clerk	290.477-014
		Sales Agent	251.357-010
	Marketing Management (04.0200)	Manager, Fast Food	185.137-010
		Manager, Department Store	185.117-010
		Manager, Merchandise	185.167-034
		Manager, Sales	163.167-018
		Wholesaler	185.167-070
	Fashion Merchandising (04.0000)	Sales Person, Men & Boys	261.357-050
		Sales Person, Women's App.	261.357-066
		Fashion Stylist	185.157-010
		Fashion Coordinator	185.157-010
		Buyer, Assistant	162.157-022

Marketing and Distribution Cluster

I. Marketing Sales

1. Sales Clerk -
290.477-014
Obtains or receives merchandise, totals bill, receives payment, and makes change for customers in such retail stores as tobacco shop, drug store, candy store, or liquor store.

2. Sales Agent, Business Services -
251-357-010
Sells business service, such as food-vending, trading stamps, detective, armored truck, telephone-answering, linen supply, and cleaning service.

II. Marketing Management -

1. Manager, Fast Food Services -
185.137-010
Manages franchised or independent fast food or wholesale prepared food establishment.

2. Manager, Department Store -
185./17-010
Directs and coordinates, through subordinate managerial personnel, activities of department store selling lines of merchandise in specialized departments.

3. Manager, Merchandise -
185.167-034
Formulates merchandising policies and coordinates merchandising activities in wholesale or retail establishment.

4. Manager, Sales -
163.167-018
Manages sales activities of establishment.

5. Wholesaler -
185.167-070
Manages establishment engaged in purchasing, wholesaling, and distributing merchandise, such as furniture and home furnishings, construction materials and supplies, metals and minerals, electrical goods, drugs and drug products, groceries and foodstuffs, and professional equipment and supplies to retailers, industrial and commercial consumers, or professional personnel.

III. Fashion Merchandising

1. Sales Person, Men's and Boy's Clothing -
261-357-050
Sells men's and boys' outer garments, such as suits, trousers, and coats.

2. Salesperson, Women's Apparel and Accessories -
261.357-066
Sells women's clothing and fashion accessories, such as coats, sportswear, suits, dresses, formal gowns, lingerie, hosiery, belts, gloves, costume jewelry, handbags, and scarfs.

3. Fashion Stylist -
185.157-010
Promotes new fashions and coordinates promotional activities, such as fashion shows, to induce customer acceptance. Same as FASHION COORDINATOR (ret. tr.).

4. Buyer, Assistant -
162.157-022
Performs following duties in connection with purchase and sale of merchandise to aid BUYER (profess. & kin.) Verifies quantity and quality of stock received from manufacturer. Authorized payment of invoices or return of shipment. Approves advertising copy for newspaper. Giver MARKERS (ret. tr.; whole tr.) information, such as price mark-ups or mark-downs, manufacturer number, season code, and style number to print on price tickets. Inspects exchanged or refunded merchandise. May sell merchandise to become familiar with customers' attitudes, preferences, and purchasing problems.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Lapping Machine Operator	603.685-070
		Lapper, Hand Tool	705.481-014
		Boring Machine Operator	606.682-010
		Tool Grinder Operator	603.280-038
	Machine Shop (17.2302)	Grinder Operator	603.685-062
		Drill Press Operator	606.682-014
		Punch Press Operator	615.685-030
		Tool Grinder	603.664-010
		Milling Machine Operator	605.685-030
		Lathe Operator	604.685-026
		Machinist	600.280-022
		Die Polisher	601.381-018
		Tool Dresser	601.682-010
		Plastic Fixture Builder	601.381-030
Metal Working Occupations (17.2399)	Machine and Tool Design (17.2399)	Plastic Tool Maker	601.381-026
		Die Maker	601.280-010
		Template Maker, Extrusion Die	601.280-038
		Tool Maker	601.280-042
Sub-Cluster		Tool and Die Maker	601-280-046
		Die Sinker	601.280-022
Sheet Metal			
Machine Shop			
Welding		Machine Helper, Welding	819.666-010
		Welder Helper	819-687-014
		Welder, Tack	810.684-010
		Welder, Gun	810.664-010
	Welding (17.2306)	Solderer, Production	813.684-022
		Brazer, Induction	813.382-010
		Solderer, Torch	813.684-026
		Welder, Gas	811.684-014
		Welder, Arc	810.384-014
		Welding Machine Operator	810.382-010
		Welder, Combination	819.384-010

Cluster (Continued) (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Mechanical Maintenance Supervisor	638.131-026
	Mechanical Technology (16.0113)	Mechanical Test Technician	869.261-014
		Mechanical Technician	600.280-010
		Mechanical Engineering Technician	007.161-026
Metal Working Occupations			
		Sheet Metal Installer	804.281-010
	Sheet Metal (17.2305)	Sheet Metal Worker, Maintenance	804.281-010
		Sheet Metal Worker	804.281-010

Metal Working Occupations Cluster

I. Machine Shop

1. Lapping, Machine Operator, Production -
603.685-070
Tends one or more lapping machines to lap surfaces of metal objects to specifications, usually on production basis.

2. Lapper, Hand Tool -
705.481-014
Laps metal objects, such as gages and machine parts, to specifications within tolerances as fine as 0.00001 inch, applying knowledge of abrasives and lapping procedures.

3. Boring-Machine Operator -
606.682-010
Sets up and operates one or more boring machines to bore, drill, mill, or ream metal parts according to specifications, tooling instructions, standard charts, and knowledge of boring procedures.

4. Tool-Grinder Operator -
603.280-038
Sets up and operates grinding machines, such as surface and universal, carbide, drill, and tool-and-cutter grinders, to sharpen cutting tools to specifications, using blueprints, job orders, and knowledge of abrasives and metal properties.

5. Grinder Operator, Production -
603.685-062
Tends one or more previously setup grinding machines that grind internal and external surfaces of metal objects to specifications on production basis.

6. Drill-Press Operator -
606.682-014
Operates previously setup drilling machines, such as single- or multiple-spindle drill presses to drill, ream, countersink, spot face, or tap holes in metal or nonmetal workpieces, according to specifications.

7. Punch-Press Operator -
615.685-030
Tends one or more power presses that trim, punch, shape, notch, draw, or crimp metal or plastic stock between preset dies.

8. Tool Grinder -
603.664-010
Sharpens and smooths cutting edge of tools, such as axes, chisels, drills, picks, and straight cutting blades, using abrasive wheel.

9. Milling-Machine Operator, Production -
605.685-030
Tends one or more previously setup milling machines to mill surfaces of metal workpieces to specifications on production basis.

10. Lathe Operator, Production -
604.685.026
Tends one or more previously setup lathes, such as turret lathes, engine lathes, and chucking machines, to perform one or more series of repetitive operations, such as turning, boring, threading, or facing, of metal workpieces according to specifications on production basis.

11. Machinist -
600.280-022
Sets up and operates machine tools, and fits and assembles parts to make or repair metal parts, mechanisms, tools, or machines, applying knowledge of mechanics, shop mathematics, metal properties, and layout and machining procedures.

II. Machine and Tool Design

1. Die Polisher -
601.381-018
Polishes and resurfaces bores and cavities of wire drawing dies to specified size and angles, using hand laps or various die polishing machines, tools, and diamond cutting pastes.

2. Tool Dresser -
601.682-010
Operates compressed-air or steam-driven machine to sharpen large drills, such as rock drills, used in construction, mining, quarrying, and well-drilling.

3. Plastic-Fixture Builder -
601.381-010
Fabricates precision plastic checking fixtures used to determine accuracy of stamped metel parts.

4. Plastic Tool Maker -
601.381-026
Molds and assembles plastic tools, such as gages, jigs, templates, and fixtures, following blueprints.

5. Die Maker, Stamping -
601.280-010
Lays out, machines, fits, assembles, and finishes metal castings and parts to make and repair stamping dies, analyzing specifications and applying knowledge of die design and construction.

6. Template Maker, Extrusion Die -
601.280.038
Lays out sheet or plate steel, and sets up and operates machine tools to make templates (replicas of cross sections of products to be extruded) used in manufacture of extrusion dies.

7. Tool Maker -
601.280-042
Analyzes variety of specifications lays out metal stock, sets up and operates machine tools, and fits and assembles parts to make or repair cutting tools, jigs and fixtures, gages, or machinists' handtools, applying knowledge of tool design, shop mathematics, metal properties, and layout, machining, and assembly procedures.

8. Tool-and-Die Maker -
601.280-046
Analyzes specifications, lays out metal stock, sets up and operates machine tools, and fits and assembles parts to make and repair metal-working dies, cutting tools, jigs and fixtures, gages, and machinists' handtools, applying knowledge of tool and die designs and construction, shop mathematics, metal properties, and layout, machining, and assembly procedures.

9. Die Sinker -
601.280-022
Lays out, machines, and finishes impression cavities in die blocks to produce forging dies, following blueprints and applying knowledge of diesinking.

III. Welding

1. Machine Helper, Welding -
819.666-010
Performs any combination of following tasks involved in use of welding, flame cutting, and brazing machines and furnaces.

2. Welder Helper -
Performs any combination of following duties to assist workers in welding, brazing, and thermal and arc cutting activities.

3. Welder, Tack -
810.684-010
Welds short beads at points specified by layout, welding diagram, or by FITTER (any ind.) I, along overlapping edges of metal parts to hold parts in place for final welding. Performs tasks of FITTER HELPER (any ind.). May tack-weld, using hand, submerged, or gas-shielded arc welding equipment. May tack-weld, using portable spotwelding gun WELDER, GUN (welding).

4. Welder, Gun -
810.664-010
Welds or tack-welds overlapping edges of prepositioned components to fabricate sheet metal assemblies, such as panels, refrigerator shells, and automobile bodies, using portable spot-welding gun.

5. Solderer-Production Line -
813.684-022
Solders together components of metal products on production line, using hand soldering iron and soft solder.

6. Brazer, Induction -
813.382-010
Sets up and operates induction heating equipment to braze (bond) together metal components, according to blueprint, work order, or layout specifications.

7. Solderer, Torch -
813.684-026
Fills holes, indentations, and seams of fabricated metal products, using solder and gas torch.

8. Welder, Gas -
811.684-014
Welds metal parts, using gas welding equipment as specified by layout, welding diagram, or work order.

9. Welder, Arc -
810.384-014
Welds together metal components of such products as pipelines, automobiles, boilers, ships, aircraft, and mobile homes, as specified by layout, blueprints, diagram, work order, welding procedures, or oral instructions, using electric arc-welding equipment.

10. Welding-Machine Operator, Arc -
810.382-010
Sets up and operates arc welding machine that welds together parts of fabricated metal products, as specified by blueprints, layouts, welding procedures, and operating charts.

11. Welder, Combination -
819.384-010
Welds metal components together to fabricate or repair products, such as machine parts, plant equipment, mobile homes, motors, and generators, according to layouts, blueprints, or work orders, using brazing and variety of arc and gas welding equipment.

IV. Mechanical Technology

1. Mechanical-Maintenance Supervisor -
638.131-026
Supervises and coordinates activities of workers engaged in maintaining and repairing mechanical parts of pumps, cranes, compressors, ditch diggers, automobiles, trucks, tractors, pipelaying machines, and similar equipment used in constructing pipelines, transporting oil and other fluids, and in related oilfield and construction or airport maintenance activities.

2. Mechanical-Test Technician -
869.261-014
Fabricates test structures and installs electronic recording instruments according to schematics, blueprints, and engineering specifications, to provide test facilities for research on aircraft arresting gear.

3. Mechanical Technician -
600.280-010
Fabricates, modifies, or repairs mechanical instruments or mechanical assemblies of electrical or electronic instruments, such as chronometric timing devices, barographs, thermostats, seismographs, and servomechanisms, applying knowledge of mechanics, metal properties, shop mathematics, and machining procedures and using machine tools, welding and heat-treating equipment, precision measuring instruments, and hand-tools.

4. Mechanical-Engineering Technician -
007.161-026
Develops and tests machinery and equipment, applying knowledge of mechanical engineering technology, under direction of engineering and scientific staff.

V. Sheet Metal

1. Sheet Metal Installer -
804.281-010
Fabricates, assembles, installs, and repairs sheet metal products and equipment, such as control boxes, drainpipes, ventilators, and furnace casings, according to job order or blueprints. Same as SHEET METAL WORKER, MAINTENANCE (any ind.) and SHEET METAL WORKER.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Occupational Home Economics (09.0200)	Child Development (09.0201)	Nursery School Attendant	359.677-018
		Playroom Attendant	359.677-026
	Textile Technology (17.3300)	Textile Lab Assistant	381.687-022
		Textile Management	789.134-010
	Clothing Construction/ Tailoring (09.0202)	Sample Stitcher	785.361-018
		Dressmaker	785.361-010
		Alteration Tailor	785.261-010
		Custom Tailor	785.261-014
	Leathercraft and Design (17.3400)	Shoe Repairer	365.361-014
		Accessory Designer	783.684-026
	Upholstery (17.3500)	Slipcover Cutter	780.381-034
		Automobile Upholsterer	780.381-010
		Furniture Upholsterer	780.381-018

Occupational Home Economics

I. Child Development

1. Nursery School Attendant - 359-677-018
   Organizes and leads activities of prekindergarten children in nursery schools or in playrooms operated for patrons of theaters, department stores, hotels, and similar organizations.

2. Playroom Attendant - 359.677-026
   Entertains children in nursery of department store, country club, or similar establishment as service to patrons. Reads aloud, organizes and participates in games, and gives elementary lessons in arts or crafts.

II. Textile Technology

1. Laboratory Assistant - 029.381-014
   Performs standardized laboratory tests to verify chemical characteristics or composition of textile fibers, yarns, and products, and materials used in processing textiles.

2. Textile Management - 789.134-010
   Supervises and coordinates activities of workers engaged in fabricating and decorating products, such as armbands, banners, and emblems. Requisitions supplies, such as bobbins, fabric, needles, and thread. Performs other duties as described under SUPERVISOR (any ind.)

III. Clothing Construction/ Tailoring

1. Sample Stitcher - 785.361-018
   Marks and cuts out material and sews parts of new style garments, following patterns, sketches, and design specifications, to prepare sample garments.

2. Dressmaker - 785.361-010
   Makes women's garments, such as dresses, coats, and suits, according to customer specifications and measurements.

3. Alteration Tailor - 785.261-010
   Alters clothing to fit individual customers or repairs defective garments, following alteration or repair tags or marks on garments.

4. Custom Tailor - 785.261-014
   Develops designs and makes tailored garments, such as suits, topcoats, overcoats, and other dress clothing,

IV. Leathercraft and Design

1. Shoe Repairer - 365.361-014
   Repairs or refinishes shoes, following customer specifications, or according to nature of damage, or type of shoe.

2. Accessory Designer - 783.684-026
   Punches holes, installs rivets, and finishes edges of leather products such as holsters, rifle cases, and belts, using handtools. Fastens parts together, using rivets, stitching machine, needle and thread, or adhesive. Attaches eyelets and metal decorations to article, using hammer and punch.

V. Upholstery

1. Slipcover Cutter - 780.381-034
   Cuts material for slipcovers according to size and shape of funiture to match patterns and insure economical use of material.

2. Automobile Upholsterer - 780.381-010
   Repairs or replaces upholstery in automobiles, buses, and trucks.

3. Furniture Upholsterer - 780.381-018
   Repairs and rebuilds upholstered furniture, using handtools and knowledge of fabrics and upholstery methods.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
		Horticultural Worker 1	405.684-014
		Horticultural Worker 2	405.687-014
Ornamental Horticulture Occupations (01.0500)	Ornamental Horticulture (01.0500)	Horticultural - Speciality Grower, Field	405.161-014
		Horticultural - Speciality Grower, Inside	405.161-018
		Landscape Gardener	408.161-010

Ornamental Horticulture Occupations Cluster

I. Ornamental Horticulture

1. Horticultural Worker I -
405.684-014
Plants, cultivates, and harvests horticultural specialties, such as flowers and shrubs, and performs related duties in environmentally-controlled structure applying knowledge of environmental systems.

2. Horticultural Worker II -
405.687-014
Performs any combination of following duties concerned with preparing soil and growth media, cultivating, and otherwise participating in horticultural activities under close supervision on acreage, in nursery, or in environmentally-controlled structure, such as greenhouse and shed.

3. Horticultural-Speciality Grower, Field -
405.161-014
Propagates and grows horticultural products and crops, such as seeds, bulbs, rootstocks, sod, ornamental plants, and cut flowers.

4. Horticultural-Specialty Grower, Inside -
405.161-018
Grows horticultural-specialty products and crops, such as flowers, ornamental plants, and vegetables, under environmentally-controlled conditions, applying knowledge of plant culture, environmental-control systems and structures, and market systems.

5. Landscape Gardener -
408.161-010
Plans and executes small scale landscaping operations and maintains grounds and landscape of private and business residences.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Transportation (17.0399)	Auto Mechanics (17.0302)	Service Station Attendant	915.467-010
		Tire Repairer	915.684-010
		Auto Mechanic Helper	620.684-014
		Brakedrum Lathe Oper.	620.682-010
		Brake Mechanic	620.281-026
		Radiator Mech.	620.381-010
		Air Cond. Installer	620.281-010
		Front End Mech.	620.281-038
		Gen. & Start. Repairer	721.281-010
		Carburetor Mechanic	620.281-034
		Tune-up Mechanic	620.281-066
		Auto Mechanic	620.261-010
Sub-Clusters	Aviation Maintenance Occupations (17.0400)	Air frame & power Plant Mech. Helper	621.684-010
Auto-Mechanics		Mechanic, Aircraft Accessories	621.381-014
Small Engines		Mechanic Field & Serv.	621.281-026
Marine Engines		Flight Engineer	621.261-018
		Air frame & Power Plant Mech.	621.281-014
	Diesel Mechanics (17.1200)	Diesel Mech. Helper	625.684-010
		Diesel Eng. Erector	625.361-010
		Diesel Eng. Tester	625.261-010
		Diesel Eng. Mech.	625.281-010
	Small Engine Mechanics (17.3100)	Power Saw Mech.	625.281-030
		Small Eng. Mech.	625.281-034
		Motor Boat Mechanic Helper	623.684-010
		Machinist Helper, Outside	633.687-010
		Outboard Motor Tester	623.261-014
		Outboard Motor Mechanic	623.281-042
		Machinist, Outside	623.281-030
		Motorboat Mechanic	623.281-038
		Machinist, Marine Engine	623.281-026

Transportation Cluster

I. Auto Mechanics

1. Service Station Attendant - 915.467-010
Services automobiles, buses, trucks, and other automotive vehicles with fuel, lubricants, and accessories.

2. Tire Repairer - 915.684-010
Repairs damaged tires of automobiles, buses, trucks, and other automotive vehicles.

3. Automobile-Mechanic Helper - 620.684-014
Assists AUTOMOBILE MECHANIC (auto. ser.) in repairing automobiles, buses, trucks, and other automotive vehicles.

4. Brake-Drum-Lathe Operator - 620.682-010
Sets up and operates brakedrum lathe to resurface automotive brakedrums, and operates grinding machine to grind brake-shoe linings.

5. Brake Mechanic - 620.281-026
Repairs and overhauls brake systems in automobiles, buses, trucks, and other automotive vehicles.

6. Radiator Mechanic - 620.381-010
Repairs cooling systems and fuel tanks in automobiles, buses, trucks, and other automotive vehicles.

7. Air-Conditioning Mechanic - 620.281-010
Installs and repairs automotive air-conditioning units.

8. Front-End Mechanic - 620.281-038
Alines wheels, axles, frames, torsion bars, and steering mechanisms of automotive vehicles such as automobiles, buses and trucks.

9. Automotive-Generator-and-Starter Repairer -
Tests, repairs, and rebuilds automotive generators, and starters.

10. Carburetor Mechanic - 620.281-034
Repairs and adjusts motor vehicle carburetors.

11. Tune-Up Mechanic - 620.281-066
Tunes automotive vehicle engines to insure efficient operation.

12. Automobile Mechanic - 620.261-010
Repairs and overhauls automobiles, buses, trucks, and other automotive vehicles.

II. Aviation Maintenance

1. Airframe-and-Power-Plant-Mechanic Helper - 620.684-010
Assists AIRFRAME-AND-POWER-PLANT MECHANIC (aircraft-aerospace mfg.; air trans.) in servicing, repairing, and overhauling aircraft and aircraft engines, performing any combination of following duties: Adjusts and replaces parts such as control cables, fuel tanks, spark plugs, and tires, using mechanic's handtools. Disconnects instruments, ignition system, and fuel and oil lines. Aids in dismantling engines. Cleans engine parts with solvents. Aids in assembling engines, control cables, and aircraft sections, such as tail assemblies and wing sections. Inflates tires, fills gasoline tanks, and oil reservoirs, and greases aircraft with grease gun. Performs other duties as described under HELPER (any ind.).

2. Mechanic, Aircraft Accessories - 621.381-014
Repairs, assembles, and tests aircraft accessories, such as power brake units, auxiliary electric motors, carburetors, spark ignitors, valves and hydramatic and vacuum pumps, using handtools and testing devices, and following shop orders and manufacturer's specifications.

3. Mechanic, Field and Service -
621.281-026
Inspects, tests, and adjusts jet, prop jet, and propeller driven airplanes during and between test flights, following specifications.

4. Flight Engineer -
621.261-018
Makes preflight, inflight, and postflight inspections, adjustments, and minor repairs to insure safe and efficient operation of aircraft.

5. Airframe-And-Power-Plant Mechanic -
621.281-014
Services, repairs, and overhauls aircraft and aircraft engines to insure airworthiness.

6. Airplane Inspector -
621.261-010
Examines airframe, engines, and operating equipment to insure that repairs are made according to specifications and certifies airworthiness of aircraft.

III. Diesel Mechanics

1. Diesel-Mechanic Helper -
625.684-010
Assists DIESEL MECHANIC (any ind.) in overhauling and maintaining diesel motors used to operate trucks, generators, and other equipment.

2. Diesel-Engine Erector -
625.361-010
Positions, fits, and secures engine parts to erect in-line, V-type, or radial diesel engines according to specifications, using machinist's handtools, surface plate, torque wrench, parallel supports, and measuring instruments.

3. Diesel-Engine Tester -
625.261-010
Analyzes operation of diesel engines and components, such as blowers and compressors to determine performance using engineering specifications and test equipment.

4. Diesel-Engine Mechanic -
625.281-010
Repairs and maintains diesel engines used to power machines, such as buses, ships, trucks, railroad trains, electric generators, and construction machinery, using handtools, precision-measuring instruments, and machine tools.

II. Small Engine Mechanics

1. Power-Saw Mechanic -
625.281-030
Repairs and maintains portable saws powered by internal combustion engines, following manufacturer's repair manuals and using handtools.

2. Small-Engine Mechanic -
625.281-034
Repairs fractional-horsepower gasoline engines used to power lawnmowers, garden tractors, and similar machines, using handtools.

V. Marine Mechanics

1. Motorboat-Mechanic Helper -
623.684-010
Assists MOTORBOAT MECHANIC (engine & turbine; ship & boat bldg. & rep.) in repairing gasoline-or diesel-powered motorboats.

2. Machinist Helper, Outside -
Assists MACHINIST, OUTSIDE (ship & boat bldg. & rep.) in installing ship machinery, such as motors, pumps, ventilating equipment and steering gear.

3. Outboard-Motor Tester -
623.261-014
Tests operation of outboard motor in tank and repairs, adjusts, or replaces parts according to specifications and engineering requirements, using measuring instruments and handtools.

4. Outboard-Motor Mechanic -
623.281-042
Analyzes defects, and adjusts or repairs electrical and mechanical systems of outboard motors.

5. Machinist, Outside -
623.281-030
Installs ship machinery, such as propelling machinery, auxiliary motors, pumps, ventilating equipment, and steering gear, working from blueprints and using handtools, calipers, and micrometers.

6. Motorboat Mechanic -
623.281-038
Repairs and adjusts electrical and mechanical equipment of gasoline or diesel-powered inboard or inboard-outboard boat engines, using handtools, power tools, and electrical testing meters.

7. Machinist, Marine Engine -
623.281-026
Installs and repairs gasoline and diesel engines in boats, such as yachts, tugs, and trawlers, following specifications.

Cluster (Secondary)	Specialized Skill Area (Post-Secondary)	Job Classifications	DOT Code
Vocational Agriculture	Agri-business (01.0100)	Inspector Grader, Agricultural	409.687-010
		Field Inspector	408.687-010
		Sales Rep., Animal Feed	272.357-010
		Sales Rep., Farm Equip.	272.357-014
		Farm Manager	180.167-018
		Farmer, General	421.161-010

Vocational Agriculture Cluster

I. Agri-Business

1. Inspector-Grader, Agriculture Establishment -
489.687-010
Inspects and grades agricultural products, such as carrots, rose bushes, strawberry plants, and tobacco, in field or shed, according to marketing specifications..

2. Field Inspector, Disease and Insect Control -
408.687-010
Inspects fields to detect presence of noxious insects and plant diseases, applying knowledge of identifying characteristics of insects and diseases.

3. Sales Representative, Animal-Feed Products -
272.357-010
Sells livestock- and poultry-feed products to farmers and retail establishments.

4. Sales Representative, Farm and Garden Equipment and Supplies -
272.357-014
Sells farm and garden machinery, equipment, and supplies, such as tractors, feed, fertilizer, seed, insecticide, and farm and garden implements, performing duties as described under SALES REPRESENTATIVE (ret. tr.; whole tr.). May sell spare parts and service contracts for machinery and equipment.

5. General Manager, Farm -
180.167-018
Manages farm concerned with raising, harvesting, packing, and marketing farm products for corporations, cooperatives, and other owners.

6. Farmer, General -
421.161-010
Raises both crops and livestock.

ADDITIONAL SPECIAL OCCUPATIONAL PROGRAMS

(This section lists specialized programs taught in only a few locations.)

SECONDARY

Aviation Mechanics (17.0401)

Clothing and Textiles (17.3300)

Home/Management Management (09.0205)

Law Enforcement (16.0605)

Mass Media (16.0699)

Office Machine Repair (17.0600)

Small Gas Engine (17.3100)

POST-SECONDARY

Cytology (07.0201)

Oceanography (16.0604)

Foremanship and Management Development (17.1700)

Watch-Making and Repair (17.2102)

Law Enforcement Technology (17.2802)